

# New York State Department of Transportation

## Yellow Flag NB2222W016

By: Sahadeo Bhagwandin

Flag Date: November 29, 2022

Superseding Information:

No Flags Superseded

### Structure Information

**BIN:** 1065318

**Feature Carried:** 278I278IX2M23027

**Feature Crossed:** 6TH AVENUE

**Orientation:** 8 - NORTHWEST

**Region:** 11 - NEW YORK CITY

**County:** KINGS

**Political Unit:** City of NEW YORK

**Approximate Year Built:** 1962

**Posted Load Matches Inventory :** Yes

**Bridge Load Posting (Tons) :** Not Posted for Load

**Primary Owner:** New York State Department of Transportation

**Primary Maintenance Responsibility:** 12 - State - Subcontracted to another Party

**Typical or Main Span Type:** 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

**Number of Spans:** 322

### Verbal Notification Information

**Person Notified:** Heinz Joachim, P.E.

**Date:** November 29, 2022 3:00:00 PM

**Of:** NYSDOT Region 11

### Signature Information

**Signature:** Sahadeo Bhagwandin, P.E. 088239-1

**Date:** December 02, 2022

**Reviewed By:** Robert Kemp

**Date:** December 05, 2022

**Attachments:** 9

## Flagged Elements

Parent Element	Element	Total Quantity	Unit
<b>Span Number : 125</b>			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

## Flagged Condition Description

This Yellow Flag No. NB2222W016 is New.

Location: Span 125, Girder G14 at Pier 124 over 3rd Avenue, Eastbound.

Description: The end of Girder G14 in Span 125 at Pier 124 exhibits a 5" long vertical through crack in the upper web stemming from the top cope and extending downwards (Photos 4 & 5).

The area surrounding the crack at the right side of the girder has up to 57% section loss over a 7" H x 4" W area based on D-meter readings (Photo 5). Adjacent to the horizontal stiffener angle at the left and right sides of the girder, the web has up to 20% section loss over a 15" H x 21" wide area (Photos 6 & 7). The web between the horizontal stiffener and the guide angle has up to 42% section loss over a 5" L x 4" H area. The lower section of the web at the right side has 1/8" to 3/16" deep section loss for 3' L x 2"- 5" H and up to 3/16" deep pitting at the top of the bottom flange for 3' L (Photo 8). The lower section of the web at the left side has 1/8" to 3/16" deep section loss for 5' L x 1"- 4" H and up to 3/16" deep pitting at the top of the bottom flange for 5' L (Photo 9). Refer to Flag Condition Sketch (Photo 2) for more details.

This is a newly flagged condition.

Notes:

1. Paint removal from the newly painted girder was not an option to determine the dimension of the crack. The length of the crack was determined solely by the visible portion of the crack at the upper section and the cracked paint with small air bubbles at the lower section.
2. Girder G13 spaced approximately 6'- 9" from the centerline of G14 has recently been repaired and is in good condition. Girder G15 similarly spaced from the centerline of G14 has been recently cleaned and repainted and exhibits up to 1/8" deep pitting adjacent to the connection angle and is in fair condition.
3. The Safe Span shielding installed by the Painting Contractor El Sol was used to access the location. Note: In the absence of the shielding, a single left lane closure on 3rd Avenue Eastbound (outbound) between 46th and 47th Streets will be required to access the location.
4. The previous 2021 Biennial Report documented the above bearing location as CS-3 with the following Condition State: Girder G14 exhibits up to 35% section loss in the web above the bottom flange in front of the bearing and at web surrounding the end diaphragm.

**Flag Photographs**

Photo Number: 1

Photo Filename: **BIN1065318 YF NB2222W016 Framing Plan - SN125**

**Gowanus Expressway**  
2022 Biennial Inspection – Field Notes

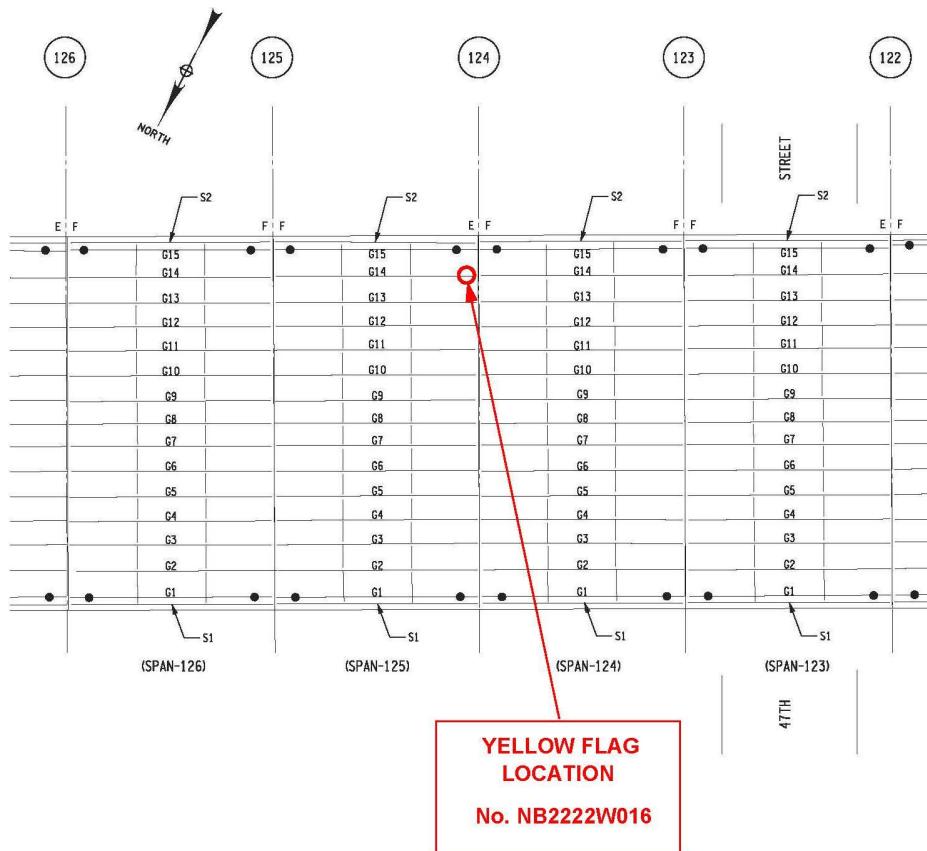
**BIN: 1065318****Team: SB/CT****Date: 11/29/2022****Span: 125****Location: G14 at Pier 124****WSP****Attachment Description: General view of framing plan with defect location.**

Photo Number: 2

Photo Filename: BIN 1065318 - YF NB2222W016 - SN125 G14 at Pier

**Gowanus Expressway**  
2022 Biennial Inspection - Field Sketch

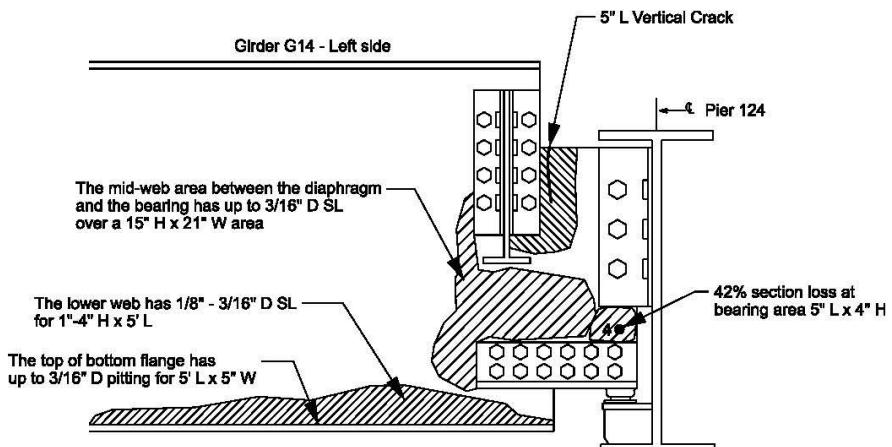
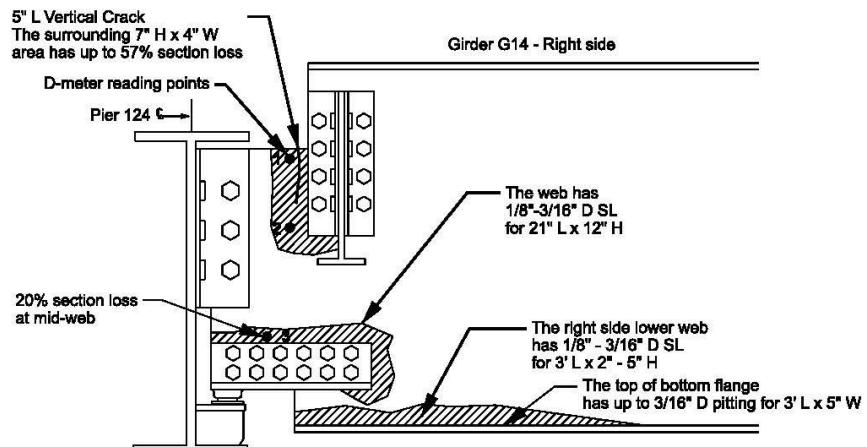
BIN: 1065318

Team: SB/CT

Date: 11/29/2022

Span: 125

Location: Girder G14 at Pier 124



## Section Loss Calculations:

(Note: RTM = Remaining Thickness Measured)

Original web thickness = 0.725"

RTM at crack area: Point 1: 0.288" Point 2: 0.341" ave.:(0.288+0.341)/2 = 0.315"

RTM at mid-web area: Point 3: 0.577"

RTM at bearing area: Point 4: 0.420"

Web section loss at crack area: (0.725-0.315)/0.725 x 100% = 57%

Web section loss at mid-web area: (0.725-0.577)/0.725 x 100% = 20%

Web section loss at bearing area: (0.725-0.42)/0.725 x 100% = 42%

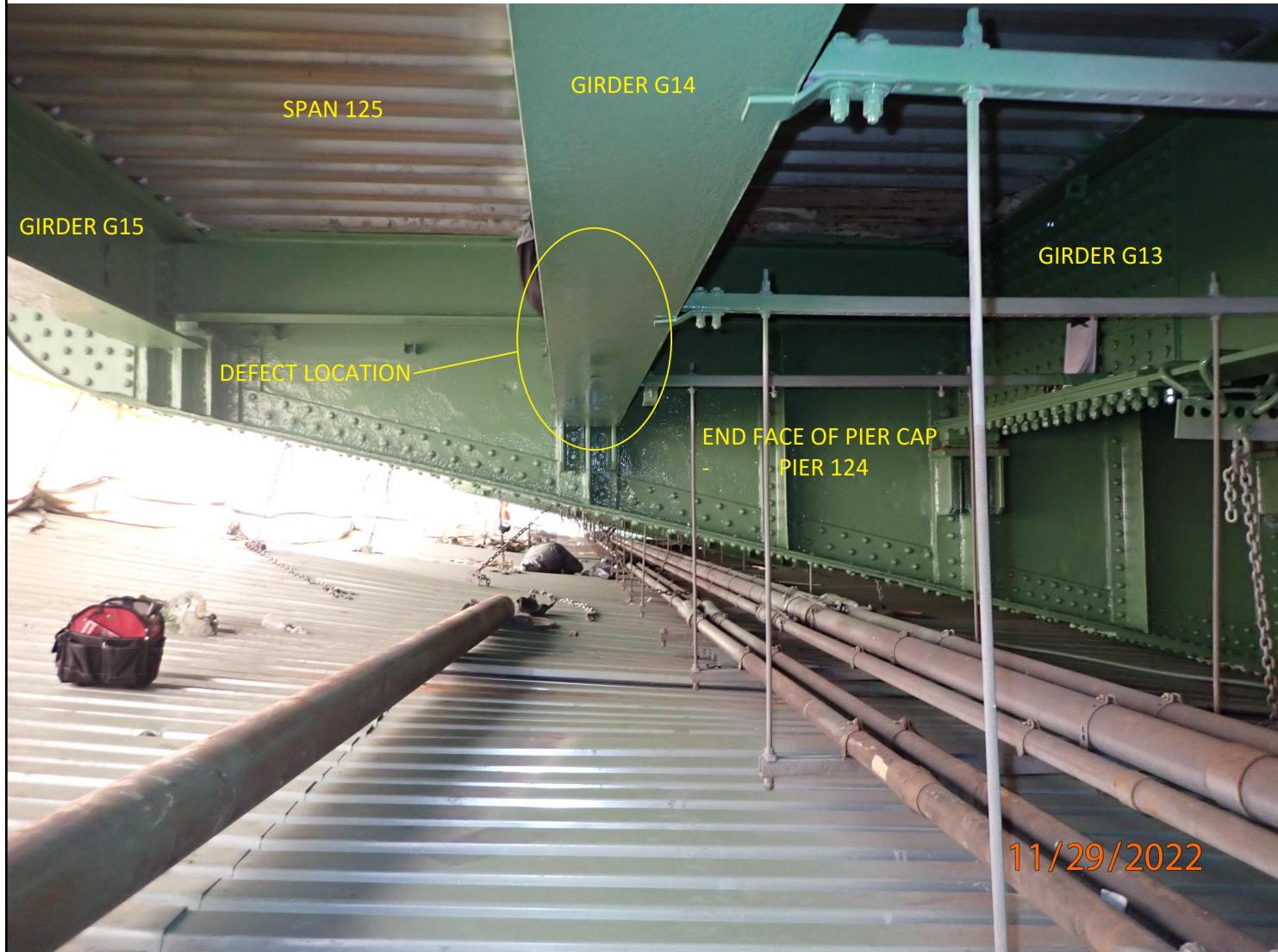
SCALE: N.T.S.

WSP

**Attachment Description:** Sketch of defects at Girder G14, beam end at Pier 124, Span 125.

Photo Number: 3

Photo Filename: PB292370.JPG



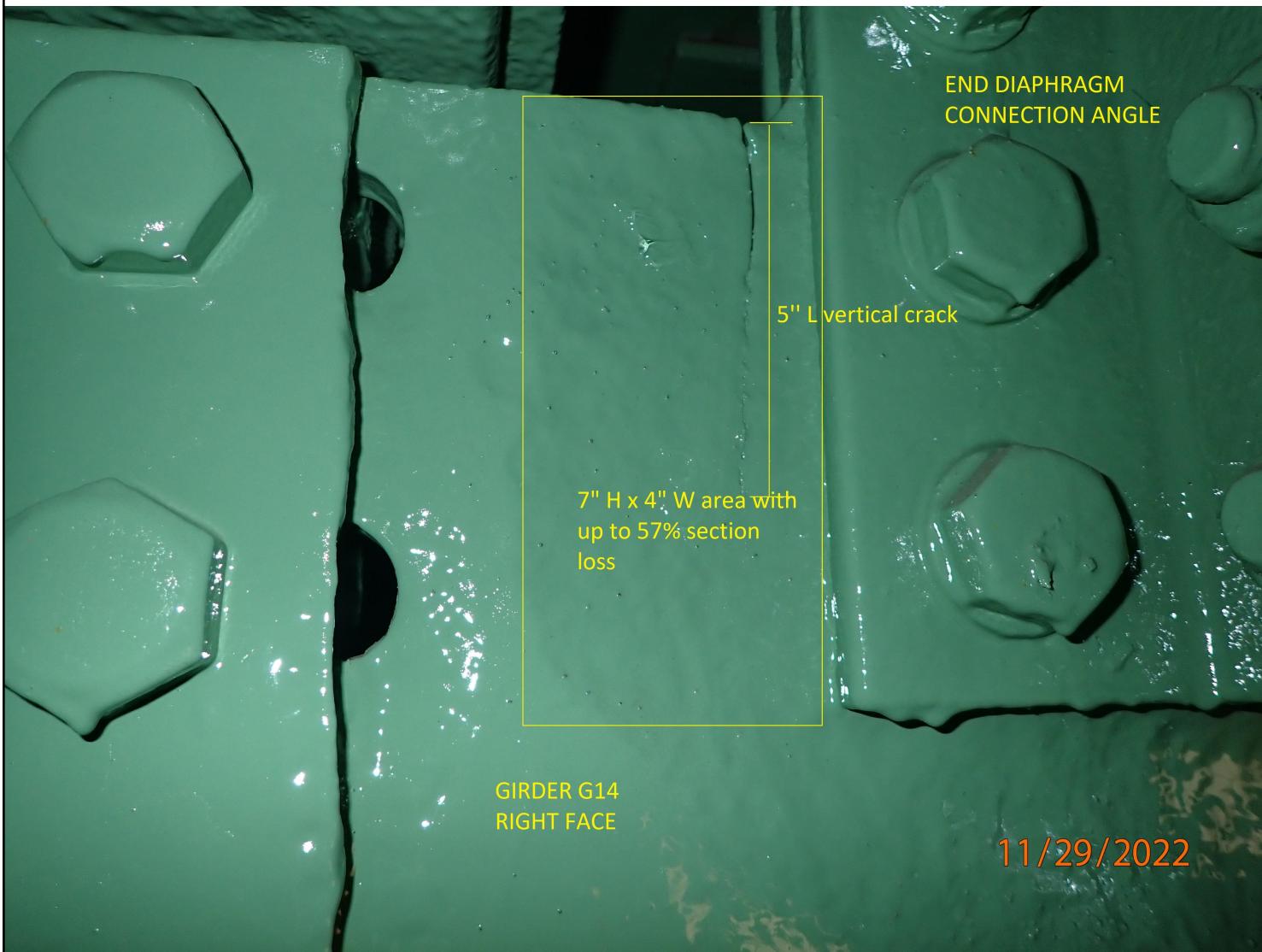
**Attachment Description:** General view of location of flagged condition, G14 at Pier 124, Span 125. Looking begin.

Photo Number: 4

Photo Filename: PB292365.JPG



**Attachment Description:** Left side of web at the upper cope has a 5" L vertical crack adjacent to the diaphragm connection. The surrounding 7" H x 4" W area has up to 57% section loss. Looking right.

Photo Number: **5**Photo Filename: **PB292348.JPG**

**Attachment Description:** Right side of web has a 5" L vertical crack. The surrounding 7" H x 4" W area has up to 57% section loss. Looking left.

Photo Number: **6**Photo Filename: **PB292353.JPG**

**Attachment Description:** Left side of web at web stiffener angle has 1/8"- 3/16" deep section loss over a 15" H x 21" W area. Looking begin right.

Photo Number: 7

Photo Filename: PB292351.JPG



GIRDER G14  
LEFT FACE

11/29/2022

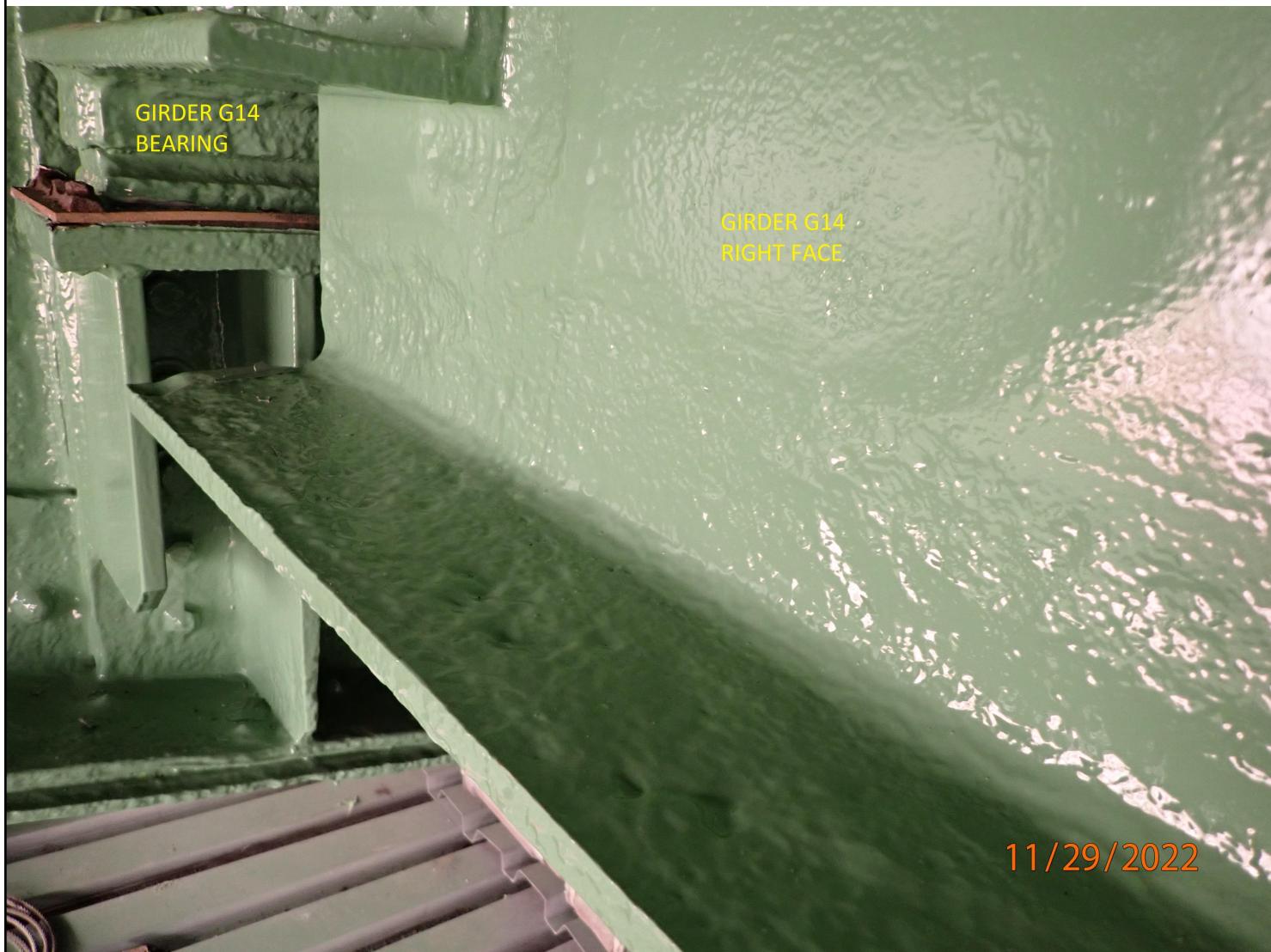
**Attachment Description:** The lower web and top of bottom flange at left side has 1/8"- 3/16" deep section loss over a 5' L section. Looking begin right.

Photo Number: 8

Photo Filename: PB292345.JPG



**Attachment Description:** The right side of the web has up to 1/8" deep section loss in the area surrounding the stiffener angle. Looking begin left.

Photo Number: **9**Photo Filename: **PB292344.JPG**

**Attachment Description:** The lower web and top of bottom flange at right side has 1/8"- 3/16" deep section loss over a 3' L section. Looking begin left.